

Striving to Improve Field Days

By: Robin Shepard, NPM Program Associate

NPM uses the on-farm demonstration as the primary method of showing farmers how to improve their management practices in ways that will protect everyone's water supplies without reducing farm profits. These demonstrations are set up principally by the farmer, using his or her equipment, time and labor. Our approach has been that farmers will learn new management techniques from practical examples that are relevant to their own personal situation.

As NPM concludes its second year of on-farm demonstration, we're taking a very close look not just at the successes of the practices themselves, but on how farmers view our field days. To help us do this, a short questionnaire was distributed to farmers attending selected events.

The field day questionnaires are especially helpful in describing who comes to our demonstrations as well as why. What we have learned from these surveys points to the importance of farmer-to-farmer contacts and personal communication networks. The most important reasons why farmers said they came to an NPM on-farm demonstration included: 50% said knowing the host farmer was a reason for attending; 42% said they were generally interested in reducing inputs in their operation; 32% said they were interested in trying the techniques on their farm. This data indicates that host farmers play an important role in the promotion of the actual field day event.



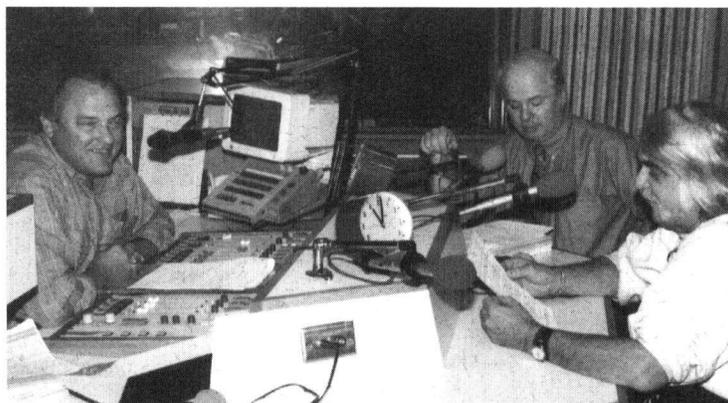
Farmers helping to improve NPM on-farm demonstration by filling out field day questionnaires

With this type of information, our planning over the winter can include ways to increase attendance from special clientele groups, how to better promote the field day events and incorporate the specific practices farmers are interested in seeing demonstrated. ❖

NPM Fields Listener Questions on the WHA Radio

On October 8, Peter Nowak and Fred Madison made a special appearance on the WHA Radio "Larry Meiller" show. Pete and Fred fielded calls from a statewide audience concerning the NPM Program and farm nutrient management practices.

With Meiller beginning the questioning, Peter outlined on some of the results from the Farm Assessment Technique survey, and then described the key areas where NPM is focusing its educational outreach activities that included: manure management, better utilization of natural nitrogen sources, and reducing pesticide inputs.



On the air! From left: Larry Meiller, Peter Nowak and Fred Madison.

Fred supplied soils expertise and technical insight concerning the best management practices that NPM has been promoting through on-farm demonstrations in many areas of the state.

The audience was also invited to participate with telephone questions. Listener questions touched several issues such as, "How does Wisconsin agriculture contribute to the state's overall pollution problems"

and "Is Wisconsin any different from other highly-agricultural based states?"

Peter Nowak, Department of Rural Sociology, is on the NPM Technical Advisory Committee. Fred Madison, department of Soil Science, is the NPM special projects coordinator. ❖

Farmstead & Field Practices Discussed at Thull Farm

By Richard Proost



NPM Regional Specialist Richard Proost discusses nutrient management at the William Thull Farm.

Approximately 60 farmers traveled to the William Thull Farm near Kewaskum on Sept. 5 to learn about efficient corn production strategies and water quality protection. The field day was sponsored by the Milwaukee River Priority Watershed Program, the Washington County offices of UW-Extension and Land Conservation, and the Nutrient and Pest Management (NPM) Program.

At the farmstead, John Bartow, Watershed Project Manager with the Washington County Land Conservation Department, informed farmers of the Milwaukee River Priority Watershed project and the cost-share assistance available for barnyard improvements. Jim Schmid, Jefferson County Extension Crops

& Soils Agent, spoke on Farm-A-Syst. Farm-A-Syst is a tool that farmers can use to assess whether or not activities around the farmstead are a potential pollution threat to their drinking water supplies. Said Schmid, "The amount of nitrogen that goes across an average Wisconsin farmstead of three acres is about 30,000 pounds. Obviously, this amount of nitrogen can create a threat to the farm's drinking water if handled improperly. Farm-A-Syst will help you determine if your practices are creating a potential problem."

The field day moved to a demonstration plot where Richard Proost, NPM Regional Specialist, emphasized efficient corn production using nutrient credits from manure and nitrogen credits measured by the preplant soil nitrate test. Proost also told farmers that reduced herbicide rates coupled with supplemental cultivation work well and cost less in terms of input and environmental impact. Proost stressed that reduced input means more time spent in the field. "Any time you reduce an input, you must increase your management time," commented Proost.

Jack Trzebiatowski, Washington County Agricultural Agent, finished the program with an economic analysis of the demonstration field. Trzebiatowski showed that crediting the nutrient value of manure, using the preplant soil nitrate test, and reducing herbicide rates can help reduce input costs and increase farm profit. "By using on-farm resources, we can manage our crop more efficiently and hopefully increase our profit," concluded Trzebiatowski. ❖

UPCOMING EVENTS

American Society of Agronomy Annual Meeting	Denver, CO	Oct. 27-Nov. 1, 1991
Harvest Fest Night in the Narrows Creek-Middle Baraboo River Watershed	Loganville Town Hall Sauk Co., WI	Oct. 29, 1991 8:00 p.m.
Lower Grant River Watershed Tour	Randy Neis Farm - Hwy 133 3 miles south of Bloomington Grant Co., WI	Oct. 31, 1991 9:00 a.m.
NPM Technical Advisory Committee Meeting	Rm 473, Horticulture U.W.-Madison	Nov. 1, 1991 9:30 a.m.
Wisconsin Land Conservation Association Annual Convention	Holiday Inn Fond du Lac, WI	Dec. 4-6, 1991
1992 Fertilizer, Aglime, & Pest Management Conference	Holiday Inn Middleton, WI	Jan. 21-23, 1992
DNR/DATCP/UWEX Nonpoint Source Water Quality Conference	Holiday Inn Middleton, WI	Jan. 27-30, 1992
Annual WALCE Training Conference	Sheraton Inn Madison, WI	Feb. 26-28, 1992

Agrichemical Movement in Sandy Soils: An Update on the Lower Wisconsin River Valley-Arena Research Project

By Kevin Fermanich

In 1988, UW-Madison soil science researchers began to study the movement of herbicides through the sandy soils of central Wisconsin and the Lower Wisconsin River Valley (LWRV). Laboratory studies showed a dramatic difference in herbicide leaching through these two soils. Over 60 times more atrazine leached through LWRV sandy soil, as compared to sandy soil from central Wisconsin.

Recognizing the groundwater quality implications of these findings, the Department of Soil Science initiated a multi-year research program to study agrichemical movement in soil and groundwater in the LWRV.

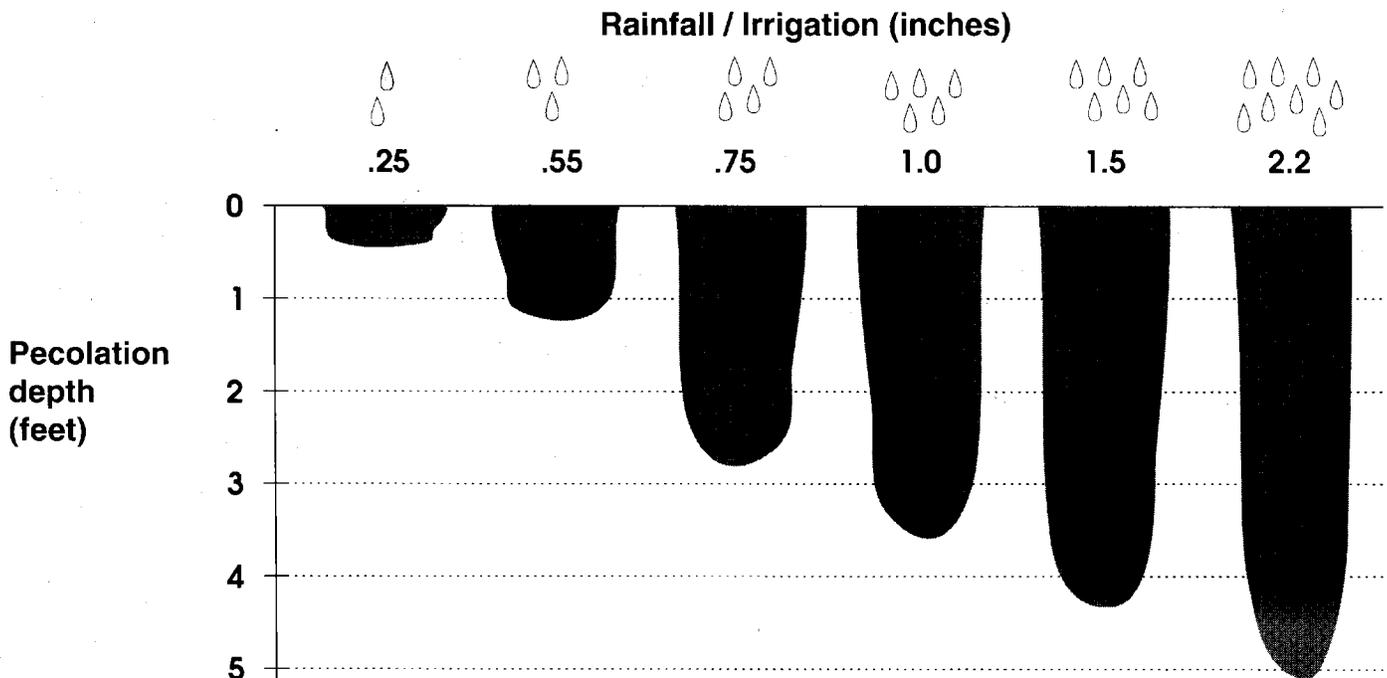
The project is supported by various state, federal and private sources. Goals of the project are to: measure water and agrichemical movement in the LWRV's sandy soil; evaluate the effects of irrigation scheduling and tillage on herbicide and nitrate leaching; compare measured solute movements with results from computer models; and refine the utility of soil survey information for agrichemical management on sandy soils.

The research site is located 1 mile north of Arena in northeast Iowa County. At a recent field day, results from the first two field seasons were discussed. Because of the sandy nature of the site, significant effort has been applied to understanding the rate of rainfall and irrigation-water movement through the soil profile. Graduate student Gary Hart explained that at moderate soil moisture contents a rainfall or irrigation of 0.75 inches will percolate to a depth of 2.5 ft. within 12 hours and that a rainfall of 2 inches will percolate to nearly 5 ft. in the same time period (see fig.). These rates of water movement are extremely fast. Movement of water below the root zone can have a significant impact on agrichemical leaching especially early in the growing season when the greatest amount of active ingredient is present.

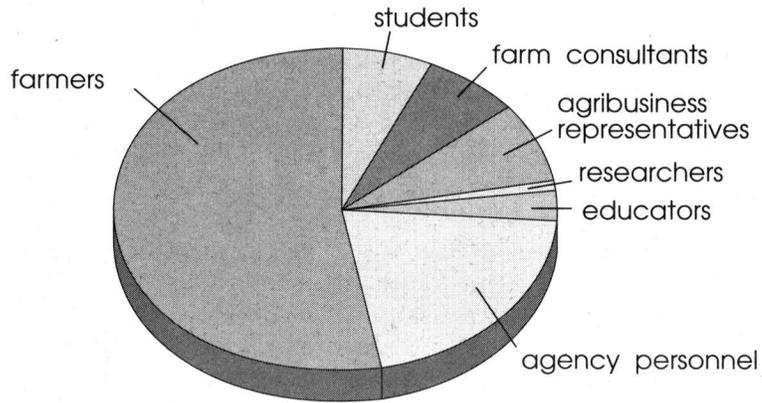
In 1990 atrazine was detected 8 ft. below the soil surface within 24 days after application. A large rainfall of 2.7 inches following nitrogen fertilization in 1990 caused significant increases in nitrate concentrations in samplers located just above the water table (8 ft.). Samples from 1991 are now being analyzed, and deep percolation of atrazine has been detected.

Further information on the LWRV-Arena project can be obtained from Kevin Fermanich (Project Coordinator), Kevin McSweeney (Co-principal Investigator) or Birl Lowery (Co-principal Investigator) at 608-262-2633. ❖

Depth of water movement under various precipitation amounts within a Lower Wisconsin River Valley sandy soil over a 12 hour period.



Typical mix of people who attend an NPM Field Day



Information gathered from field day questionnaires. For details see story on page 1.

Wisconsin Nutrient and Pest Management (NPM) program provides educational and informational opportunities for Wisconsin farmers, farm supply businesses, and agchemical dealers. NPM is administered through:

**University of Wisconsin-Extension
Cooperative Extension Service**

**College of Agricultural and Life Sciences
University of Wisconsin-Madison**



NPM Field Notes
1575 Linden Drive
University of Wisconsin
Madison, WI 53706



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